

**AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES  
MADE, AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS**

1. (Cancelled)
2. (Currently amended) The DNA expression construct according to claim 4 21, wherein the respective encoding ~~proteins that~~ protein is ~~are highly~~ at least 98% homologous, ~~but not identical~~ to the at least one original structural protein "gag" (~~"gag"~~) ~~and/or~~ and the original membrane (~~"env"~~) "env" protein of FeLV, ~~with a homology to the corresponding wild type of at least 98%.~~
3. (Currently amended) The DNA expression construct according to claim 4 21, containing the nucleotide sequence ~~Seq.ID 5~~ SEQ ID NO. 5, which has been mutated in the course of codon optimization encoding the "gag" related structural protein.
4. (Withdrawn) DNA expression construct according to claim 1, containing the nucleotide sequence Seq.ID 7, which has been mutated in the course of codon- and slice optimization, encoding the env-gp85 related membrane protein.
5. (Withdrawn) DNA expression construct according to claim 1, containing the nucleotide sequences Seq.ID 8, which has been mutated in the course of codon- and slice optimization, encoding the env-gp 70 related membrane protein.
6. (Currently amended) The DNA expression construct according to claim 4 21, wherein the at least one of structural ~~and/or~~ and membrane proteins are encoded completely or partially by the corresponding nucleotide sequences.
7. (Currently amended) The DNA expression construct according to claim 4 21, where the expression construct is a plasmid.

8. (Currently amended) The DNA expression construct according to claim 4 21, ~~where~~ wherein the immunizing polypeptide sequences are in the form of expression constructs, said constructs consisting of covalently closed linear deoxyribonucleotide molecules comprising a linear double stranded region, wherein ends of the double stranded region ~~and where the single strands forming the double strand~~ are linked by to short single stranded loops consisting of deoxyribonucleotides, ~~and where said double strand forming single strands only consist~~ consisting only of encoding sequences under the control of a promoter and a terminator sequence ~~that is operable in the~~ an animal to be vaccinated, ~~and a terminator sequence.~~
9. (Currently amended) The DNA expression construct according to claim 4 21, ~~where~~ wherein the expression construct is covalently linked to one or more peptides.
10. (Currently amended) The DNA expression construct according to claim ~~8~~ 9, ~~where~~ wherein the peptide is composed of 30 amino acids, at least half of which are a member of the group consisting of arginine and lysine.
11. (Currently amended) The DNA expression construct according to claim ~~9~~ 10, wherein the peptide comprises the sequence PKKKRKV (~~proline-B-lysine-B-lysine-B-lysine-B-arginine-B-lysine-B-valine~~).
12. (Currently amended) A Pharmaceutical pharmaceutical composition, especially a vaccine, for the production of at least one of a preventive ~~and/or~~ and therapeutic immunity in Felidae, especially the cat, ~~containing~~ comprising a DNA expression construct according to claim 4 21, and a pharmaceutically effective carrier.

13. (Withdrawn) Protein with the amino acid sequence Seq. ID 6, which is a protein highly homologous to the original structural protein ("gag") of the feline leucosis virus (FeLV).

14. (Canceled)

15. (Withdrawn) Protein with one of: the amino acid sequence Seq.ID9, which is a protein highly homologous to the original membrane protein gp85 ("env") of the feline leucosis virus (FeLV); or

The amino acid sequence Seq.ID10, which is a protein highly homologous to the original membrane protein gp70 ("env") of the feline leucosis virus (FeLV).

16. (Withdrawn) Monoclonal antibody against a protein according to claim 13.

17. (Withdrawn) Polyclonal antibody against a protein according to claim 13.

18. (Withdrawn) Kit for the diagnosis of infections in cats with the Feline Leucosis virus, comprising one or more antibodies according to claim 16.

19. (Withdrawn) Monoclonal antibody against a protein according to claim 15.

20. (Withdrawn) Polyclonal antibody against a protein according to claim 15.

21. (New) A DNA expression construct for the expression of the Feline Leucosis virus in cat cells comprising:

A promoter sequence operable in Felidae and at least one Feline Leucosis virus nucleotide sequence which is mutated as compared to a wildtype Feline Leucosis virus nucleotide sequence and comprises no open or hidden donor or acceptor sequences, said mutated nucleotide sequence encodes at least one of a structure protein "gag" and a membrane protein "env", wherein said nucleotide sequence encodes a protein which is highly homologous, but not identical to at

least one of: the wildtype structure protein "gag" and the wildtype membrane "env" of FeLV, or encodes a highly homologous but not identical portion thereof.